

the Lalande prize to Mr. S. W. Burnham, for his work on double stars; the Valz prize to M. de Campos Rodrigues, for work done at the Lisbon Observatory, with especial reference to the determination of the solar parallax by means of the planet Eros; the Janssen medal to M. Hansky.

*Geography.*—The Binoux prize, divided between M. Baratier (for his work in connection with Colonel Marchand's expedition in Central Africa), M. Bénard (for his work on Arctic exploration), and M. Alphonse Berget (for his book on the physics and meteorology of the globe); the Gay prize to Mr. Bell Dawson, for his hydrographic work in eastern Canada; the Tchihatchef prize to Lieut.-Colonel Lubanski, for his explorations in Indo-China; the Delalande-Guérineau prize to M. Auguste Pavie, for work in French China.

*Physics.*—The Hébert prize to M. Georges Claude, for his work on electricity for general readers; the Hughes prize to Lieut.-Colonel E. Ariès, for his publications on the theory of heat and chemical statics; the Kastner-Boursault prize to Captain Ferrié, for his work on wireless telegraphy.

*Chemistry.*—The Jecker prize, divided between MM. Freundler, Minguin, and Lespieau; the Cahour prize, divided between MM. Chavanne, Kling, and Binet du Jassoneix; a Montyon prize (unhealthy trades), divided between MM. Dupont and Détourbe.

*Botany.*—The Desmazières prize to M. Guilliermond, for his work on cryptogams, especially fungi; the Montagne prize to M. Camille Sauvageau, for his work on algæ; the de la Fons-Mellicocq prize is not awarded.

*Anatomy and Zoology.*—The Savigny prize to M. Krempf; the Thore prize to M. d'Orbigny.

*Medicine and Surgery.*—A Montyon prize to M. Paul Reclus, for his memoir on the proper use of cocaine in surgery; to M. Kermogant, for his work on exotic pathology and hygiene; and to M. Cazalbou, for his researches on the trypanosomiasis of the French Soudan. Mentions are also accorded to MM. P. Launois and Roy, for their biological studies on giants; MM. F. Bezancon and M. Labbé, for their treatise on hæmatology; and to M. Odier, for his work on the action of electricity and certain poisons on nerve cells. MM. F. Marceau, P. Briquel, J. Gagnière, and R. Voisin are accorded citations. The Barbier prize to MM. Prenant, Bouin and L. Maillard, for their book on histology, and a mention to M. Pierre Lesage; the Bréant prize (accumulated interest) to M. Frédéric Borel, for his memoir on cholera and plague in relation to Mahometan pilgrimages; the Godard prize to MM. J. Albarran and L. Imbert, for their memoir on tumours of the kidney; the Baron Larrey prize to M. Conor, for work on typhoid fever, M. E. Lafforgue receiving a mention; the Bellion prize to M. Jules Delobel, for his book on hygiene in schools, M. Gabriel Gauthier receiving a mention; the Mège prize to M. G. Delamare, for his experimental researches on morbid heredity.

*Physiology.*—A Montyon prize to M. J. Jolly, for his memoir entitled "Experimental Researches on the Indirect Division of the Red Blood Corpuscles," a very honourable mention being accorded to M. C. Fleig, for his work on the mode of action of chemical stimulants on the digestive glands; the Philipeaux prize to M. Cristiani, for his work on thyroid grafting, an honourable mention being accorded to M. Joseph Noé; the Lallemand prize, divided between M. Maurice de Fleury (for his works on the nervous system) and MM. J. Camus and P. Pagniez (for their memoir on psychotherapy); the Pourat prize to M. J. Tissot, for a study of the physical and chemical phenomena at high altitudes; the Martin-Damourette prize, divided between M. A. Frouin (1000 francs) and M. Manquat (400 francs).

Among the general prizes, the Lavoisier medal was awarded to Sir J. Dewar, for his work on the liquefaction of gases; the Berthelot medal to MM. Freundler, Minguin, Lespieau, Kling, Binet du Jassoneix, Dupont, and Paul Villard; the Jerome Ponti prize to M. Maurain; the Trémont prize to M. A. Guillemin; the Gegner prize to M. J. H. Fabre; the Lannelongue prize to Mme. Vve. Nepveu; the Leconte prize to M. René Blondlot, for his work taken as a whole; the Wilde prize to M. Paul Villard, for his work in physics; the Houlevigue prize to MM. Henri de la Vaulx and Henri Hervé, for their work in aeronautics;

the Saintour prize to M. Charles Frémont, for his experimental researches on the elasticity of metals; a Montyon prize (statistics), divided between M. V. Lowenthal, for twelve memoirs relating to the depopulation of France, and M. Paul Razous, for his memoir on the mortality and liability to disease in dangerous professions, MM. Henry Guégo, E. Maury, and Ott receiving mentions; the Jean-Jacques Berger prize is divided between MM. J. Resal (6500 francs), A. Alby (3500 francs), Laurent (2000 francs), Grimaud (1500 francs), and Retraint (1500 francs).

## UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

**LIVERPOOL.**—The arrangements for excavations to be made during the winter under the auspices of the university institute of archæology, in Upper Egypt, have been completed, and the work will be begun at Hierakonpolis before the New Year. The excavations have been placed as in previous years at Beni-Hasan, Negadeh, and elsewhere under the care of the university reader in Egyptian archæology.

**DR. NORMAN MOORE** has been appointed a member of the consultative committee *vice* Prof. Bertram C. A. Windle, F.R.S., who has resigned his membership upon appointment as president of Queen's College, Cork. Dr. Moore is chairman of the board of advanced medical studies of the University of London, and represents the Royal College of Physicians upon the General Medical Council.

The annual meeting of the Geographical Association will be held at the Royal Colonial Institute, Northumberland Avenue, London, W.C., on Friday, January 6, at 4 p.m. The president, Mr. Douglas W. Freshfield, will be in the chair. A report on the eighth international geographical congress will be read by Mr. H. Yule Oldham, and there will be a discussion on practical geography in schools.

ON December 20 Lady Warwick distributed the prizes gained by the students of the evening classes and of the day secondary school of the Carpenters' Company at Stratford. In the course of some remarks upon the school, she said that England needed a better system of secondary education, and it was now acknowledged that the State should take the matter in hand. But in the meantime the city companies were doing a good work in bringing secondary education to the doors of the people.

The annual conference of the Public Schools Science Masters' Association will be held at Westminster School on Saturday, January 14, 1905. The following are among the subjects to be discussed:—(1) the importance of including both Latin and natural science in a scheme of general education; (2) recent proposals for school leaving certificates; (3) the use and misuse of terms in science teaching; (4) the possibility of teaching "scientific method" to boys whose education is almost entirely literary and who have no time for a regular course in chemistry and physics. Sir Michael Foster, K.C.B., is the president of the association for the year.

New buildings of the Willesden Polytechnic, erected at a cost of about 10,000*l.*, were formally declared open by Sir W. Anson on December 21. After distributing prizes to the successful students, Sir W. Anson remarked that polytechnics marked what he hoped was becoming the modern view of education, that it did not consist of independent sets of studies, but was a composite whole, no part of which did not rest upon or form a foundation for another part. It should be borne in mind that a polytechnic did not merely train a student in a handicraft. The object of such an institution was to combine theory and practice, to teach the student not only how to do a thing, but why it was done in a particular way, so that he became not only skilful in the craft upon which he was engaged, but got to understand the scientific principles underlying his work.

**MR. L. L. PRICE** read a paper at the meeting of the Royal Statistical Society on December 20 entitled "Accounts of the Colleges of Oxford, 1893-1903, with Special Reference

to their Agricultural Revenues." The paper is based on the accounts, published annually, of the colleges (and the university) of Oxford, and is a continuation of one read in 1895. The gross external receipts of the colleges (and the university) in 1903 exhibited an increase on 1893 of 29,797*l.*, and on 1883 of 16,343*l.* The net external receipts of the colleges alone showed an increase of 16,566*l.* on 1893, and a decrease of 10,311*l.* from 1883. Later in his paper Mr. Price states that it hardly seems extravagant to affirm that during a quarter of a century the colleges (and the university) have lost between a third and a fourth of their agricultural revenues. Had it not been for an increase in revenues derived from other sources, they would have been crippled yet more seriously. The most noticeable feature is the large increase in the receipts from houses and sites of houses. Between 1883 and 1903 these receipts were doubled, and between 1893 and 1903 they increased from 56,877*l.* to 91,388*l.* On the whole this gross increase has more than balanced the gross diminution in the receipts from lands and tithe. The internal receipts of the colleges increased by 5814*l.* between 1883 and 1893, and by 11,428*l.* between 1893 and 1903.

THE annual conference of headmasters of public schools was held this year at Christ's Hospital, West Horsham, on Thursday and Friday last, December 22 and 23. Among the subjects discussed on Thursday were the recommendations of the consultative committee of the Board of Education for the establishment of school certificates, and the policy of the Board of Education in encouraging the sending of intending elementary school teachers to secondary schools in lieu of pupil teacher centres. The following resolutions were adopted:—"That the question of school certificates be referred to the committee of the conference with a view to immediate action, and that it be an instruction of the committee to obtain in writing the opinion of every member of the conference on the various points involved in the scheme of the consultative committee." "That this conference pledges itself to support the education authority in its policy of providing that candidates for pupil teacherships in public elementary schools shall receive a substantial portion of their education in a public secondary school, and considers it desirable that as many recruits as possible for teacherships in public elementary schools should be obtained from the ranks of ordinary pupils of secondary schools." On Friday a discussion took place on the subject of Greek, with special reference to the proposals of the Cambridge Syndicate, and the following resolution was carried by twenty-one votes to eight:—"That, without committing itself to details, the conference generally disapproves of the Cambridge Syndicate with regard to Greek in the Previous Examination." The conference also expressed itself against some of the reforms of the new Army entrance examinations, and carried the following resolution unanimously:—"That this conference hopes that the scheme for qualifying certificates in the examination for Woolwich and Sandhurst will be so amended as to encourage the study of Latin." A strong representation is to be made to the War Office on this subject. It was also agreed that the committee of the conference should consider the syllabus issued by the Board of Education on the teaching of English literature, and should include their recommendations in the annual report.

## SOCIETIES AND ACADEMIES.

### LONDON.

**Royal Meteorological Society**, December 21.—Capt. D. Wilson-Barker, president, in the chair.—Decrease of fog in London during recent years: F. J. Brodie (*Discussion*).—The study of the minor fluctuations of atmospheric pressure: Dr. W. N. Shaw, F.R.S., and W. H. Dines. The authors described an apparatus called the "micro-barograph," which they have designed to magnify the minor fluctuations, and at the same time to disentangle them from the general barometric surges. They also showed some records from three of these instruments. The authors wish to obtain information as to the nature of the disturbances and the causes to which they may be assigned. Among the causes which suggest themselves as likely to

produce temporary fluctuations of the barometric curves are stated by the authors to be (1) atmospheric billows passing along surfaces where there is discontinuity of density in a manner somewhat similar to ocean waves; (2) the passage of minute whirls or cyclonic depressions of small scale; (3) variations of pressure due to the attraction or repulsion produced by electric stress as masses of air at different potential pass over; (4) the mechanical effects of wind; and (5) the mechanical effects of rapid condensation of aqueous vapour.

## DIARY OF SOCIETIES.

### MONDAY, JANUARY 2.

VICTORIA INSTITUTE, at 4.30.—Confucianism: Rev. A. Elwin.

### WEDNESDAY, JANUARY 4.

GEOLOGICAL SOCIETY, at 8.—The Marine Beds in the Coal Measures of North Staffordshire: J. T. Stobbs.—The Palæontology of the Marine Bands in the North Staffordshire Coalfield: Dr. Wheelton Hind.—The Geology of Cyprus: C. V. Bellamy, with Contributions by A. J. Jukes-Browne.

### THURSDAY, JANUARY 5.

RÖNTGEN SOCIETY, at 8.15.—Description of an Automatic Vacuum Pump: C. E. S. Phillips. (The apparatus will be shown at work.)—Exhibition of a Method by which Strongly Adherent Films of Aluminium may be applied to Glass.—A Note on the Coloration of Glass by Radium Radiation.

### FRIDAY, JANUARY 6.

GEOLOGISTS' ASSOCIATION, at 8.—The Third Issue of the British Association Geological Photographs: Dr. C. G. Cullis.

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